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REMARKS

Claims 1 to 97 are the pending claims being examined in the application, of which Claims 1, 34, 39, 59 and 93 are independent. Claims 1, 34 and 39 are being amended. Reconsideration and further examination are respectfully requested.

By the Office Action, Claims 1, 4 to 27, 32, 33, 39, 42 to 59, 62 to 85, 91 and 92 are rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 6,438,579 (Hosken '579), Claims 2, 3, 28 to 31, 34 to 38, 40, 41, 60, 61, 86 to 90 and 93 to 97 are rejected under 35 U.S.C. § 103(a) over Hosken '579 and U.S. Patent No. 6,430,539 (Lazarus). Reconsideration and withdrawal of the rejections are respectfully requested for at least the following reasons.

The record is clear that Hosken '579 was filed after the effective filing date of the present application, and that Hosken '579 can only be prior art if it is shown to be entitled to the benefit of the filing date of U.S. Provisional Application No. 60/144,377 (the '377 Hosken provisional). As Applicant has previously pointed out, in order for Hosken '579 to be prior art, there must be a showing that Hosken '579 is entitled to the filing date of the '377 Hosken provisional. Reference is respectfully made to MPEP § 2136.03(III), which states in relevant part:

> "[t]he 35 U.S.C. 102(e) critical reference date of a U.S. patent or
> U.S. application publications and certain international application
> publications entitled to the benefit of the filing date of a
> provisional application under 35 U.S.C. 119(e) is the filing date of
> the provisional application with certain exceptions >**if** the
> provisional application(s) properly supports the subject matter
> relied upon to make the rejection in compliance with 35 U.S.C.
> 112, first paragraph.<" (Emphasis in original.)

The first paragraph of 35 U.S.C. 112 referenced in MPEP § 2136.03(III) states:

> "[t]he specification shall contain a written description of the
> invention, and of the manner and process of making and using it, in
> such full, clear, concise, and exact terms as to enable any person
> skilled in the art to which it pertains, or with which it is most
> nearly connected, to make and use the same, and shall set forth the

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> best mode contemplated by the inventor of carrying out his
> invention."

As can be seen from the above-quoted authority, Hosken '579, and the portions of Hosken '579 relied upon to reject the claims of the present application, can only be entitled to the filing date of the '377 Hosken provisional if the '377 Hosken provisional provides § 112, first paragraph support, i.e., support which satisfies the written description, enablement and best mode requirements, for the portions of Hosken '579 relied upon to reject the claims of the present application. Without such a showing, Hosken '579 cannot be prior art to the claims of the present application.

In response to the Applicant's previous remarks regarding the use of Hosken as prior art to reject the claims of the present application, the Examiner concedes that Hosken "discloses more than the '377 Hosken provisional application, but that there is no need for the Examiner to compare the two documents." See page 8 of the current Office Action. The Examiner further concedes that the '377 Hosken provisional "couldn't be formally used against the claimed invention." See page 7 of the current Office Action.

The Applicant agrees with the Examiner that the '377 Hosken provisional cannot be used against the claims of the present application, and further agrees that Hosken '579 discloses more than the '377 Hosken provisional. In addition, the Applicant submits that the portions of Hosken '579 that admittedly disclose more than the '377 Hosken provisional cannot claim the benefit of the '377 Hosken provisional, and these portions of Hosken '579 cannot be relied upon to reject the claims of the present application. The concessions made in the Office Action provide even more justification for Applicant's repeated requests that the Examiner confirm that those portions of Hosken '579 that the Examiner is using to reject the claims of the present application are supported by an enabling description provided by the '377 Hosken provisional, or alternatively withdraw the §§ 102(e) and 103(a) rejections of the claims.

It is clear from MPEP § 2136.03(III) that the burden lies with the Examiner to provide a showing. In the interest of advancing prosecution, although not intended to be an exhaustive and complete listing, the Applicant provides the following examples of Hosken '579 taken from the cited portions of Hosken '579 which the Applicant believes lack an enabling description in the '377 Hosken provisional.

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With respect to Claims 1, 4 to 27, 32, 33, 39, 42 to 59, 62 to 85, 91 and 92, the Office Action applies col. 2, line 52 to col. 3, line 34, col. 5, line 8 to col. 6, line 38, and col. 9, lines 23 to 65 of Hosken '579. It is submitted that there are significant parts of the cited portions of Hosken '579 that disclose more than the '377 Hosken provisional, and therefore cannot be applied against Claim 1.

At col. 2, line 52 to col. 3, line 34, Hosken '579 refers to "self-collaborative" development of content-based relationships; a system that "determines a scope of applicable similarities between a particular [user] and other users and recommends items within the applicable scope"; "self-collaborative relationships"; "group collaborative relationships"; capturing "multi-level media content relationship information" for use as "data evaluatable in providing particularized media content item recommendations"; "continuing development of both group and personal interest profiles"; "implicit collaborative data"; "the length and nature of the consideration of [items] inferentially [reflecting] the user's relative interest in particular media content items"; "confidence levels in the inferences drawn", development and refinement of confidence levels; and further refers to explicit information providing "high-confidence information that can be incorporated into the group and individualized collaborative data." These are just some of examples of the description found in col. 2, line 52 to col. 3, line 34 of Hosken '579 which cannot be found the '377 Hosken provisional, and for which there is no apparent corresponding enabling description in the '377 Hosken provisional.

At col. 5, line 8 to col. 6, line 38, Hosken '579 refers to "individual and collaborative profiles", while the '377 Hosken provisional only refers to a user profile. This portion of Hosken '579 further describes that a user's navigation of a presented recommendation set and the user actions in reviewing and considering individual and groups of media content items are utilized in the progressive modification and refinement of the profiles data, however, the '377 Hosken provisional fails to provide a description, enabling or otherwise, of progressively modifying and refining profiles data based on a user's navigation of a presented recommendation set. Furthermore, the '377 Hosken provisional fails to provide a description, enabling or otherwise, as to how a user action is even reflected in a user profile. The '377 Hosken provisional states that a user profile consists of a content item and the content item's rating. The '377 Hosken provisional fails to provide a description, enabling or otherwise, as to how a content item rating

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is defined other than by a user expressly providing the rating. The '377 Hosken provisional lacks any description as to how implicit behavior, a user action, or information other than a user's express input of a rating, is used to generate a rating for a content item. In addition, nothing in the '377 Hosken provisional provides any description, enabling or otherwise, of how implicit behavior or a user action identifies the content item. The discussion found at col. 5, line 8 to col. 6, line 38 of Hosken '579 also refers to deriving "other information" from "periods of user non-action. In this same discussion, Hosken '579 suggests that "the time spent by a user" to review information or listen to a music clip provides implicit information regarding the interest level of the user. Nothing can be found in the '377 Hosken provisional that provides enabling support for deriving information from periods of user non-action, determining an amount of time spent by a user in a non-action, let alone a determined amount of time spent by a user providing implicit information.

Col. 9, lines 23 to 65 of Hosken '579 describe a weighting filter 56 that combines the product of an expert weighting filter 54 with group behaviors 60 that reflect the consideration and review of different media content items collectively by the users of the system and behaviors obtained from other sources. Applicant can find no support for the group behaviors, the weighting filter 56 or the expert weighting filter 54, or the operation of either filters with group behaviors 60 in the '377 Hosken provisional. This portion of Hosken '579 further describes group behaviors being derived from information that is generated outside the system described in Hosken 579. This also cannot be found in the '377 Hosken provisional.

With regard to Claims 4 to 11 of the present application, the Office Action cites col. 11, line 1 to col. 13, line 30 of Hosken '579. The discussion found at the top of col. 11 of Hosken '579 is a continuation of a table, Table III, which itemizes the implicit user behavior that Hosken '579 monitors, which consists of the activities of specifying items and criteria as search parameters, prescreening items by viewing or listening to the item, reviewing artist and collection descriptions, viewing analyst content reviews, adding an item to a purchase or gift list and then purchasing the item, and the browsing time spent in connection with a particular item. None of these "activities" are even mentioned in the '377 Hosken provisional. Furthermore, as discussed above, there is nothing in the '377 Hosken provisional that provides an enabling

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disclosure as to how implicit behavior is translated into a meaningful value, i.e., the item or item rating, that the '377 Hosken provisional necessarily depends upon to make its recommendations.

The remaining portion of col. 11 of Hosken '579 states that binary relations and weightings produced from explicit behaviors and implied behaviors are represented as ratings that are then stored in the user profile, which ratings are represented as normalized values from 1.0 to -1.0, that confidence ratings are produced for such ratings, that a normalized confidence rating for explicit behavior is 9.0 and that a normalized confidence rating for an implicit rating is between 9.0 and 0.0, and that weighted relations data are provided by an expert weighting filter. The Applicant cannot find anything in the '377 Hosken provisional which provides a description, which enables any of the description found in col. 11 of Hosken '579, including the Hosken '579 description of binary relations and weightings produced from behavior being represented as ratings, the normalization of ratings or confidence levels, a confidence level of any type, an expert weighting filter and/or weighted relations data.

The discussion commencing at the bottom of col. 11 and continuing at the top of col. 12 of Hosken '579 describes a set of user profiles as a sparse matrix of interrelated characterizing attributes derived from explicit, implicit and other direct information rating source. Hosken '579 continues and states that each cell of the matrix stores data for a combination of users and particular characterizing attributes, the portion of the sparse matrix corresponding to a current user is presented as the current user profile to a referral system, which produces a recommendation set in response to a user request. Hosken '579 provides a table, i.e., Table IV, which defines the types of requests consisting of a "Media Content Item" request, which provides a set of recommendations based on a particular media content item, a "New Dance" request, which provides recommendations of new releases in the dance genre, a "Top Ten Pop Tracks" request, which provides recommendations of media content items similar to the current top ten pop tracks, and a "Re-Releases" request, which provides recommendations of re-released collections. The '377 Hosken provisional lacks any enabling descriptive support for Hosken's '579 sparse matrix, the contents of cells in a sparse matrix, let alone multiple types of requests for a recommendation, as identified in Table IV of Hosken '579.

The portion of Hosken '579 commencing at col. 12, line 38 describes a referral system that operates as a graph traversal system over a data set constructed from a user profile and the

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product of a final weighting filter. The referral system traverses the binary relationships between characterizing attributes (i.e., "$Track_1 \rightarrow Artist_1 \rightarrow Genre_A \rightarrow Artist_2 \rightarrow Tracks_2 \rightarrow Collection_X$", as provided in Hosken '579) to compute a final rating and confidence based on a weighted rating and confidence associated with each step traversed, and uses a final weighting filter to apply an empirical normalization to weighting values. To highlight just some, but in no way all, of the examples of the lack of enabling support for Hosken's '579 referral system, the '377 Hosken provisional lacks any enabling description of the referral system described in Hosken '579, including lacking an enabling description of traversing a graph, assigning weighted ratings and confidence levels to steps in a traversal, computing a final rating and confidence level for a traversal, and/or using a final weighting filter to apply an empirical normalization to weighting values.

With regard to Claims 12 and 13 of the present application, the Office Action cites col. 3, lines 17 to 34 and col. 5, lines 20 to 62, both of which are discussed above, and col. 4, lines 11 to 55 of Hosken '579. At col. 4, lines 11 to 55, Hosken '579 mentions the referral system that derives implicit profiling data, without any description of how the referral system derives implicit profiling data. In addition, the '377 Hosken provisional lacks any enabling disclosure as to how implicit profiling data is derived.

The Office Action cites col. 5, lines 20 to col. 6, line 67, which is discussed above, and col. 8, line 38 to col. 11, line 9, portions of which are also discussed above. Although a good part of col. 8, line 38 to col. 11, line 9 has been addressed hereinabove, the Applicant provides some additional examples to further highlight the extent to which the Hosken '579 discloses more than the '377 Hosken provisional. Commencing at col. 8, line 66, Hosken '579 describes its expert weighting filter as providing a logical map of various items listed in an industry database, the map providing weighting values for those in the industry database that share characterizing attributes. According to Hosken '579, the map weighting value of 1.0 indicates a fixed relationship, with lesser weighting values representing a subjective expert opinion on similarity. Hosken's '579 expert weighting filter, logical map, and weighting values used to identify a fixed relationship or an expert-specified relationship has no correspondence in the '377 Hosken provisional.

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At col. 10, lines 19 to 38, Hosken '579 provides a table, Table II, which lists explicit user behavior as user input in connection with: (1) initial interview or survey used to collect information to construct a profile; (2) presenting a specific ratings request to the user whenever particular content is considered by the user; (3) a spot-light type quick rating poll presented to the user regarding new or special content items, (4) rating the perceived value of opinions expressed by particular analysts, periodicals and other information sources, (5) prompted rating of prior content purchases; and (6) edits and specific changes made to the user profile. In contrast, the '377 Hosken provisional simply describes that "the user may explicitly enter music items and ratings using a form style interface."

Based at least on the above and the concessions made in the Office Action, the Applicant respectfully submits that there are significant portions of Hosken '579 relied upon by the Examiner to reject the claims of the present application which are not supported or enabled by the disclosure of the '377 Hosken provisional. Since the grounds for rejection of the pending claims relies on portions of Hosken '579 for which there is no enabling disclosure provided by the '377 Hosken provisional, a rejection so based is improper and should be withdrawn. Applicant therefore respectfully requests withdrawal of the §§ 102(e) and 103(a) rejections of the pending claims, in accordance with MPEP § 2136.03(III) and 35 U.S.C. § 112, first paragraph.

Furthermore and while Hosken '579, at col. 13, line 34 to col. 16, line 54, appears to reproduce examples taken from page 7, line to page 12, line 28 of the '377 Hosken provisional, these examples fail to teach, suggest or disclose the each and every element of the claims. Therefore, these examples cannot form the basis of a proper § 102(e) rejection or a § 103(a) rejection.

Turning to the language of Claim 1, a method is recited which includes accepting item selections detected from a plurality of users, generating a log for each user, each log containing identifiers corresponding to detected user item selections, scoring each of the user logs, the scoring for each user log being responsive to a degree of occurrence of the at least one query item identifier in the user log, so as to generate a user log score for each user log based exclusively on detected user item selections and the at least one query item, and determining at least one result item responsive to a degree of occurrence in at least a subset of the scored user

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logs, so as to discover at least one relationship based exclusively on detected user item selections and the at least one query item.

With apparent reference to Claim 1, the Examiner's comments to the Applicant's previous remarks, which comments are found at page 8 of the Office Action, focus on one of the examples, the "Collaborative Recommendation" example. See the '377 Hosken provisional, commencing at page 10, and col. 15, line 9 to col. 16, line 20 of Hosken '579. The Examiner alleges the following:

> Hosken '377 teaches accepting item selection (user choosing an item); generating user log (profile based on implicit and explicit rating data for music provided by users) containing identifiers (vectors) corresponding to detected user item (see pp 5 lines 6-20); accepting a query (selection) and scoring (correlating similarity between the user ratings and other users' rating and determining weigh for each item to give rating weight (see pp 11 line 4 to pp. 12 line 6) being responsive to a degree of occurrence of the item identifier in the user logs (weight for each item determined by multiplying the correlation with the rating to give the correlated rating weight (pp 8 lines 14-25); determining at least one result item (recommendation) (see pp 10-13 and abstract and fig. 2b to fig. 5).

The '377 Hosken provisional identifies a user profile as consisting of information identifying a music item and rating information. While the '377 Hosken provisional indicates that this information can be provided using explicit rating information provided by the user or through implicit observation of the system based on users' actions, the '377 Hosken provisional lacks any disclosure, enabling or otherwise, as to how user profile information or user profile rating information, is derived from implicit observation of users' action. Furthermore, the '377 provisional fails to provide any disclosure that would enable one of ordinary skill to use observed behavior, or ratings information derived from observed behavior, to make a recommendation.

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     In addition, nothing in the examples provided in the '377 Hosken provisional and in Hosken '579 can be said to correspond to scoring each user log, the scoring for each user log being responsive to a degree of occurrence of at least one query item, the user log score that is generated being based exclusively on detected user item selections and the at least one query item.

     In the "Collaborative Recommendation" example referenced in the current Office Action, a correlation is determined between the user and a user cluster. While the example refers to a correlation algorithm that performs this correlation, there is no description of how this algorithm determines a correlation between a user and a user cluster. After correlating the user with a user cluster, i.e., "Dance" in the example, the example proceeds to identify other users in the "Dance" cluster, by searching each user's user profile to identify whether the profile identifies the user as being a part of the "Dance" cluster. When another user, referred to herein as the "cluster user," is found to be a member of the identified cluster, the example calculates a correlation between the user and the cluster user. Again, the example fails to provide any enabling disclosure as to how the correlation is performed. If the calculated correlation between the user and the cluster user meets a threshold, the two users' profiles are compared to identify any items contained in the cluster user's profile that are not contained in the user's profile. At page 11, line 4 to page 12, line 6 of the '377 Hosken provisional, a weight is determined for an item that is found in the cluster user's profile but not found in the user's profile. The weight is determined to be the calculated correlation between the user's profile and the cluster user's profile multiplied by the rating of the item not found in the user's profile. Even assuming *arguendo* that the assumption apparently made by the examiner that a user profile corresponds to a user log (a point that is in no way conceded, and in fact the two are different as apparent from a reading of the cited versus instant application), a calculated rating weight for an item in a user profile, as is described in the "Collaborative Recommendation" example, rates an item in the user profile, not the user profile. A rating weight calculated for one item contained in the cluster user's profile, as in Hosken '377, cannot be said to correspond to the claimed score for a user log, as the two items result from different processes and are not used in the same manner. The Hosken teaching apparently determines if a user likes "Dance" music by correlating with other users that like "Dance" music, while the embodiment of claim 1 is directed to determining a result to a search query based on

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user item selection identifiers contained in user logs, and the query itself, as a function of scoring of the user log scores, not the weighting of an individual item in a user profile.

For at least the foregoing reasons, the "Collaborative Recommendation" example fails to teach, suggest or disclose multiple elements of Claims, 1, 39 and 59 (and the claims that depend from Claims 1, 39 and 59).

Turning to independent Claims 34 and 93, among the features recited therein, is a feature of generating, based on a determined log likelihood ratio, a representation of a relationship between a first item and a second item based on implicit user behavior, which the Examiner contends is taught by Lazarus. In view of the above discussion, it should be clear that any rejection of the claims based on Hosken '579 is improper, and should be withdrawn, and accordingly the combination of Hosken '579 and Lazarus is untenable, since Lazarus alone cannot cure the deficiencies of Hosken '579, hence all claim limitations cannot be rendered obvious. The § 103(a) rejection of Claims 34 and 93, and the claims that depend from these claims, based on Hosken '579 and Lazarus should be withdrawn.

For at least the foregoing reasons and the concessions made in the Office Action, the rejection based on Hosken '579 is improper, since significant portions of Hosken '579 relied upon to form the rejection lack enabling descriptive support in the '377 Hosken provisional. Furthermore, the remaining portions of Hosken '579 relied upon in the Office Action are missing multiple elements of each of the pending claims. Hosken '579 cannot therefore form the basis for a § 102 rejection, and reconsideration and withdrawal of the § 102(e) rejection of the claims so rejected are respectfully requested. Furthermore, Hosken '579, either alone or in combination with Lazarus (if such combination is even proper, a point which is in no way conceded) cannot form the basis for a §103(a) rejection of the claims, as the record is devoid of a teaching of the missing elements.

In view of the foregoing, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.
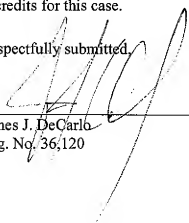
Should matters remain which the Examiner believes could be resolved in a telephone interview, the Examiner is requested to telephone the Applicant's undersigned attorney. Alternatively, since it is believed that the claims of the present application are in condition for

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allowance, the Examiner is respectfully requested to issue a Notice of Allowance at the Examiner's earliest convenience.

The applicant's attorney may be reached by telephone at 212-801-6729. All correspondence should continue to be directed to the address given below, which is the address associated with Customer Number 32361.

The Commissioner is hereby authorized to charge any required fee in connection with the submission of this paper, any additional fees which may be required, now or in the future, or credit any overpayment to Account No. 50-1561. Please ensure that the Attorney Docket Number is referenced when charging any payments or credits for this case.

Respectfully submitted,

Date: August 31, 2007

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